The results concerning the molecular weights of these small scale reactions are calculated and a curve of molecular weight against time is drawn. The time needed for obtaining molecular weight 7,000±2,000 Da is calculated from the curve and performed on larger scale reaction. On average, working at 26° C. the time period is 17 hours. The product is poured into excess water, filtered, washed and dried, yielding the trifluoroacetyl-copolymer-1.

Preparation of low-toxicity copolymer-1

20 g of trifluoroacetyl-copolymer-1 are dispersed in 1 liter of water to which 100 g piperidine are added. The mixture is stirred for 24 hours at room temperature and filtered. The solution of crude copolymer-1 is distributed into dialysis bags and dialyzed at 10°–20° C. against water until a pH=8 is attained. It is then dialyzed against about 0.3% acetic acid and again water until a pH=5.5–6.0 is obtained. This solution is then concentrated and lyophilized to dryness.

What is claimed is:

1. A method of manufacturing copolymer-1, comprising reacting protected copolymer-1 with hydrobromic acid to form trifluoroacetyl copolymer-1, treating said trifluoroacetyl copolymer-1 with aqueous piperidine solution to form copolymer-1, and purifying said copolymer-1, to result in copolymer-1 having a molecular weight of about 5 to 9 kilodaltons.

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